

In the claims

1 (currently amended). In a data processing system including a host and at least one disk array storage device including a plurality of first logical devices for interacting with a first application and that constitute a consistency group and at least one second logical device that can interact for interacting in a first mode as a mirror for a corresponding one of the first logical device-devices in the consistency group, a method for enabling the shift of the second logical devices to the second mode in a consistent manner whereby each second logical device can interact with a second application with read and write capabilities, said method for shifting to the second mode comprising the steps of:

- A) generating a request data structure for each second logical device in the consistency group,
- B) preventing write operations to ~~any each~~ of the first logical devices in the consistency group associated with the second logical devices identified in the request data structure,
- C) ~~initiating a shift all of the shifting~~ each of the at least one identified second logical devices-device in the consistency group to the second mode after said disablement write prevention operation occurs, and
- D) enabling write operations to all the first logical devices in the consistency group upon completion of

said shifting whereby interactions between the first application and all the first logical devices in the consistency group resume and whereby the second application can interact with the second logical devices in the consistency group.

2 (currently amended). A method as recited in claim 1 wherein the disk array storage device includes a buffer and a write operation includes a first transfer of data from a host to the buffer as a write pending entry and a second transfer of the write pending entry to a logical device and wherein said shifting of a second logical device to the second mode includes detaching the second logical device from its corresponding first logical device, attaching the second logical device to the second application and managing the transfer of write pending entries in the buffer, said ~~initiation of the shift of~~ the identified second logical devices including said detaching and attaching steps.

3 (original). A method as recited in claim 2 wherein said managing of write pending entry transfers occurs after said write operations to said first logical devices resume.

4 (currently amended). In a data processing system including host and at least one disk array storage device including a plurality of first logical devices for interacting with a first application and that constitute a consistency group and a second logical device that ~~can interact~~ interacts in a first

mode as a mirror ~~at least one of~~ ~~for each corresponding the~~
first logical device ~~devices~~ in the consistency group, a
control means for enabling the shift of ~~each of the~~ second
logical devices to a second mode in a consistent manner whereby
each second logical device can interact with a second
application with read and write capabilities, said controller
comprising:

- A) request means for generating a request data structure
for second logical device in the consistency group,
- B) locking means for preventing write operations to any
of the first logical devices associated with the
second logical devices in the consistency group,
- C) mode shift means initiating a shift all of the
identified second logical devices in the consistency
group to the second mode after said ~~disablement~~ write
prevention occurs, and
- D) unlocking means for enabling write operations to all
the first logical devices in the consistency group
upon completion of said shifting whereby interactions
between the first application and all the first
logical devices in the consistency group resume and
whereby the second application can interact with a
second logical device in the consistency group.

5 (original). A system as recited in claim 4 wherein the disk
array storage device includes a buffer and a write operation
includes a first transfer of data from a host to the buffer as
a write pending entry and a second transfer of the write

pending entry to a logical device and wherein said shifting of a second logical device to the second mode includes detaching the second logical device from its corresponding first logical device, attaching the second logical device to the second application and managing the transfer of write pending entries in the buffer, said interaction means enabling the resumption of interaction between the first application and corresponding first logical devices after the detaching and attaching of all the identified second logical devices.

6 (original). A system as recited in claim 5 wherein each of said identified second logical devices includes means for managing write pending entry transfers after said interaction means enables the resumption of interactions between the first application and the first logical devices.

7 (currently amended). A program for operation in a data processing system including a host and at least one disk array storage device including a plurality of first logical devices for interacting with a first application and that constitute a consistency group and at least one second logical device that ~~can interact for interacting~~ in a first mode as a mirror for a corresponding ~~one of the first logical device-devices~~ in the consistency group, the program enabling the shift of the second logical devices to the second mode in a consistent manner whereby each second logical device can interact with a second application with read and write capabilities, said program comprising:

- A) a module for generating a request data structure for each second logical device in the consistency group,
- B) a module for preventing write operations to any each of the first logical devices in the consistency group associated with the second logical device identified in the request data structure,
- C) a module for initiating a shift all of the identified second logical devices in the consistency group to the second mode after said disablement write operation prevention, and
- D) a module for enabling write operations to all the first logical devices in the consistency group upon completion of said shifting whereby interactions between the first application and all the first logical devices in the consistency group resume and whereby the second application can interact with the second logical devices in the consistency group.

8 (original). A program as recited in claim 7 wherein the disk array storage device includes a buffer and a write operation includes a first transfer of data from a host to the buffer as a write pending entry and a second transfer of the write pending entry to a logical device and wherein said shift initiating module detaches the second logical device from its corresponding first logical device, attaches the second logical device to the second application and a write pending module manages the transfer of write pending entries in the buffer.

9 (original). A program as recited in claim 8 wherein said write pending module manages write pending entry transfers after said write operations to said first logical devices resume.